UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte ANDRE HEUER, CHRISTOF BUDNIK,
and SASCHA J. KONRAD

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Appeal 2014-008643
Application 12/779,110[1]
Technology Center 3600

_____

Before HUBERT C. LORIN, JAMES A. WORTH, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1, 4–7, 9–12, and 15–20. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE and enter a NEW GROUND OF REJECTION under 37 C.F.R. § 41.50(b).

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[1] According to the Appellants, the real party in interest is Siemens Corporation. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The claimed subject matter in the Appeal "is generally directed to test model abstraction, and more particularly to domain engineering testing in product line engineering." Spec. ¶ 2. According to the Specification, "good industrial practice requires that each product and variant thereof be tested and verified as meeting the design requirements"; thus, avoiding the duplicative testing of common portions of a product line can achieve savings of time and cost. *Id.* ¶¶ 3, 24. To this end, claim 1, which is illustrative, describes the abstraction process in terms of "segmenting" a portion of a "workflow," which is then "substitut[ed]" by a "stub activity" that simulates the behavior of the abstracted portion (*see id.* ¶ 21):

> 1. A method for product line testing comprising:
>
> segmenting, by a processor, a plurality of variable activities of a workflow, the workflow comprising the plurality of variable activities and a plurality of common activities, wherein each of the plurality of variable activities identifies an activity that is not common to each variance of the workflow and wherein each of the plurality of common activities identifies an activity that is common to each variance of the workflow;
>
> inserting, by the processor, a workflow decision node into the workflow prior to the segmented plurality of variable activities;
>
> generating, by the processor, a stub activity for the plurality of variable activities;
>
> configuring, by the processor, the stub activity to generate a valid output for each of the plurality of variable activities; and
>
> substituting, by the processor, the stub activity for the plurality of variable activities.

REJECTIONS

I. Claims 1, 4, 5, 7, 9, 10, 12, 15, 16, and 18–20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bachman et al. (US 2003/0217054 A1, pub. Nov. 20, 2003) ("Bachman") and Bowman-Amuah (US 2001/0052108 A1, pub. Dec. 13, 2001).

II. Claims 6, 11, and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bachman, Bowman-Amuah, and Catthoor et al. (US 2002/0099756 A1, pub. July 25, 2002) ("Catthoor").

FINDINGS OF FACT

The findings of fact relied upon, which are supported by a preponderance of the evidence, appear in the following Analysis.

ANALYSIS

Claim 1

The rejection of independent claim 1 under 35 U.S.C. § 103(a) is not sustained because the Appellants (*see* Appeal Br. 5–9, Reply Br. 2–3) persuasively argue that the Examiner's citations to the Bachman reference fail to teach or suggest the following features of claim 1:

> segmenting, by a processor, a plurality of variable activities of a workflow, the workflow comprising the plurality of variable activities and a plurality of common activities, wherein each of the plurality of variable activities identifies an activity that is not common to each variance of the workflow and wherein each of the plurality of common activities identifies an activity that is common to each variance of the workflow.

The Examiner takes the position that the recited features are taught by paragraphs 200, 205, 219, 224, 561, and 568 of Bachman. *See* Answer 4–5.

Yet, as the Appellants argue (*see* Appeal Br. 5–9; Reply Br. 2–3), although the identified portions of Bachman refer to a "common runtime client queue" (¶ 205) and "workflow context variables" (¶ 200 ("In cases where data is returned from the transaction the I/O source or workflow context variable is stored"), *see also* ¶ 568), the identified paragraphs do not disclose the claimed "common activities" (which, per claim 1, are "common to each variance of the workflow") and "variable activities" (which, per claim 1, are "not common to each variance of the workflow").

Accordingly, the rejection of independent claim 1 under 35 U.S.C. § 103(a) is not sustained.

Independent Claims 7 and 12
and Dependent Claims 4–6, 9–11, and 15–20

The Appellants contend that independent claims 7 and 12 contain limitations similar to those in independent claim 1 and that the Examiner erred in rejecting claims 7 and 12, for reasons similar to those provided for claim 1. Appeal Br. 17–18.

The Appellants' arguments regarding the "common activities" and "variable activities" limitations discussed above, in regard to claim 1, also apply to independent claims 7 and 12 — each of which contains similar language. *See* Appeal Br. 19–20, Claims App. Accordingly, the Examiner erred in rejecting claims 7 and 12, under, for the same or similar reasons discussed above.

Because the rejection of independent claims 1, 7, and 12 are not sustained, the Examiner's decision rejecting their respective dependent

claims (collectively, claims 4–6, 9–11, and 15–20) under 35 U.S.C. § 103(a) is not sustained.

<div align="center">NEW GROUND OF REJECTION</div>

Claims 1, 4–7, 9–12, and 15–20 are newly rejected under 35 U.S.C. § 101 as being directed to judicially-excepted subject matter.

A driving concern of this exception is that of preemption. *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347, 2354 (2014). Laws of nature, natural phenomena, and abstract ideas are deemed not patentable, because they are regarded as the basic tools of scientific and technological work, such that their inclusion within the domain of patent protection would entail the risk of inhibiting future innovation premised upon them. *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2113 (2013) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293, 1301 (2012)).

"At the same time, we tread carefully in construing this exclusionary principle lest it swallow all of patent law," because "[a]t some level, 'all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.'" *Alice*, 134 S. Ct. at 2354 (citing *Mayo*, 132 S. Ct. at 1293–94).

The Supreme Court has identified a two-step framework for determining whether claimed subject matter is judicially-excepted from patent eligibility under § 101. *Alice*, 134 S. Ct. at 2355.

According to step one, "we determine whether the claims at issue are directed to one of those patent-ineligible concepts," such as an abstract idea. *Alice*, 134 S. Ct. at 2355 (citing *Mayo*, 132 S. Ct. at 1296–97).

Taking claim 1 as representative of the claims on appeal, the claimed subject matter is directed to the abstract idea of simulating the operation of a component. This is a basic principle of technological work that would suffer a risk of preemption by claim 1, if granted. *See* Victor Pankratius, Product Lines for Digital Information Products 58 (2007) (referring to "test mock-ups (or stubs) that 'simulate' the behavior of unfinished components"); Klaus Pohl, Günter Böckle & Frank van der Linden, Software Product Line Engineering Foundations, Principles, and Techniques 259 (2005) ("In order to test the interactions between a common component and an absent variant, a stub can be used. The stub simulates the behaviour of the corresponding plug-in component during integration testing."); Edward Yourdon & Larry L. Constantine, Structured Design: Fundamentals of a Discipline of Computer Program and Systems Design 344, 422 (2d ed. 1978) ("The concept of a *dummy module*, or *stub*, is an important aspect of top-down implementation"; defining "stub" as "a primitive implementation of a subordinate module; normally used in the top-down testing of a superordinate module.") Thus, the present analysis proceeds to *Alice*'s second step.

The Supreme Court has characterized step two as a search for an "inventive concept" in the claimed subject matter — that is, an element or combination of elements "'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Alice*, 134 S. Ct. at 2355 (alteration in original) (quoting *Mayo*, 132 S. Ct. at 1294).

We see nothing in the subject matter claimed that transforms the abstract idea of classification into an inventive concept. Notably, claim 1 is

drawn in broad, generic terms that do not constrain the abstract idea.
Although a "processor" is recited, this does not meaningfully restrict the
claim. A recitation of sufficiently limiting features, under the second step of
Alice, "requires more than simply stating an abstract idea while adding the
words 'apply it' or 'apply it with a computer.' Similarly, the prohibition on
patenting an ineligible concept cannot be circumvented by limiting the use
of an ineligible concept to a particular technological environment." *Versata
Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1332 (Fed. Cir. 2015)
(citations omitted). Even so, the invocation of a "processor" does not even
restrict the claim to the realm of computer software, as a "processor" could
be employed in a wide variety of physical environments. Further, for a
claim directed to an abstract idea to be patent-eligible, under the second step
of the *Alice* analysis, it must involve more than performance of "'well-
understood, routine, conventional activit[ies]' previously known to the
industry." *Alice*, 134 S. Ct. at 2359 (quoting *Mayo*, 132 S. Ct. at 1294).
Claim 1 does not meet this standard, because the Specification indicates that
the disclosed subject matter "can be implemented on a computer using well-
known computer processors, memory units, storage devices, computer
software, and other components." Spec. ¶25. Indeed, the Specification
incorporates by reference U.S. Provisional Application No. 61/175,529,
which describes systems and methods for identifying variable activities that
could be subject to the claimed "segmenting" step. *Id.* ¶ 16.

For the foregoing reasons, we find that claim 1 covers claimed subject
matter that is judicially-excepted from patent eligibility under § 101. The
other independent claims — claim 7 (drawn to a "system") and claim 12
(drawn to a "non-transitory computer-readable medium") — parallel claim

1and similarly cover claimed subject matter that is judicially-excepted from patent eligibility under § 101. The dependent claims describe additional features in broad and generic terms, which do little to patentably transform the abstract idea.

Therefore, we enter a new ground of rejection of claims 1, 4–7, 9–12, and 15–20 under 35 U.S.C. § 101.

DECISION

We REVERSE the Examiner's decision rejecting claims 1, 4–7, 9–12, and 15–20 under 35 U.S.C. § 103(a).

We ENTER A NEW GROUND OF REJECTION for claims 1, 4–7, 9–12, and 15–20 under 35 U.S.C. § 101.

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review." Section 41.50(b) also provides:

> When the Board enters such a non-final decision, the appellant, within two months from the date of the decision, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:
>
> (1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground of rejection is binding upon the examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground of rejection designated in the decision. Should the examiner reject the

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claims, appellant may again appeal to the Board pursuant to this subpart.

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

<u>REVERSED; 37 C.F.R. § 41.50(b)</u>